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The Reform and Innovation of English Course: A Coherent Whole of MOOC, Flipped Classroom and ESP

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Abstract

ESP (English for Specific Purposes) is prevailing in China nowadays, but with the traditional teaching model, its development has been blocked by the limitation of the traditional teaching. Researchers are exploring the new model for English teaching, they combine ESP with MOOC (Massive Open Online Courses) and “Flipped Classroom”(a reversal of traditional teaching) theoretically instead of practically. With the theory of constructivism, the paper focuses especially on the implementation of the new model. The new model is taken into practice with the combination of ESP, MOOC and “Flipped classroom”. According to Tyler, the father of the curriculum theory, the paper shows the new model in four parts: Purpose, content, teaching organization and teaching evaluation. The new model has been implemented for a term, the author collects students objective and subjective feedback and makes the quantitative and qualitative analysis of the effects of the new model with the software SPSS. The paper makes the conclusion of three advantages of the new model and gives suggestions to the education of English in the future.

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Keywords: MOOC; Flipped classroom; English; ESP

1. MOOC and its development around the world

Here introduce the paper, and put a nomenclature if necessary, in a box with the same font size as the rest of the paper. The paragraphs continue from here and are only separated by headings, subheadings, images and formulae. The section headings are arranged by numbers, bold and 10 pt. Here follows further instructions for authors. MOOC develops fast in China and around the world in the 21st century, which is different from the online video education, it is the combination of online course, mutual communication and interactivity. MOOC gains more advantages than online course. In this way, it prevails in China, especially for the implication of MOOC on English course.

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1.1. MOOC

Since 2008, Massive Open Online Courses has been given its new name “MOOC”, it is mainly about online courses but different from online education with its own characters in spreading knowledge models and learning styles. The process of MOOC includes registration, learning, exercising, homework, discussion, examination, completion and certificates. Stephen Downes said MOOC was mainly about “people” (Downes. S, 2008). So MOOC gains the advantage of interactive communication. With its short time learning less than 30 minutes for one lesson, each course is also allocated the related information and tests. Students can discuss, evaluate, interact, do surveys with each other. So MOOC is a mixture of learning including teachers, students, videos, emails, tests and communication.

1.2. MOOC around the world

Since 2014, more than 400 universities around the world has supplied with MOOC, which was doubled compared in 2013, and MOOC accelerates its development in 2015: America with 700,000 learners, India with 162,000 learners, Britain with 86,000 learners and China with 75,000 learners (MOOC, 2015). MOOC also appears in Australia and countries in South-America and Africa.

China, with the high speed development of online education, has focused on its network online courses project since 2000, and embodied MOOC in 2012. The cooperation with MOOC move forward with two directions: MOOC courses at home and overseas. More than 73 universities combine two styles of education: traditional class with advanced MOOC. China consider MOOC as the major development and give universities freedom to grow with their own characters (Yuan & Liu, 2014). Nowadays, MOOC develops fast in China, it develops mainly in theory and research, but poor in management and implementation. This paper goes to the barren area, it makes the further breakthrough in English education of universities.

2. Introduction of the new model

The new model combines MOOC with traditional education, and flipped the role of lecturers and students, the new model is called MFE for short in the following.

MFE is implemented in the course of metallurgical English. The course was formally allocated with online learning platform (ESP platform), which is with advantages and disadvantages, For this time, the course takes another new model of MFE with the former online platform. The new practice intends to make the course advance to the new level.

2.1. Causes for MFE

There are four reasons to start MFE:

- Online learning is the new tendency and the only road for education. MOOC plays the leading role in this area.
- Online learning cannot develops well without the advantage of traditional universities (Peng, 2015). Higher education is not only about knowledge, its main goal is to let people know themselves, the environment, the world, to grasp new skills, and to be a comprehensive human being. Universities play the irreplaceable role in education.
- “Flipped classroom” thrives nowadays with the great improvement of student learning, Khan school considers it the most important revolution in educating technology. It is also the best teaching style combing MOOC, “flipped classroom” and traditional education (Sherr, 2014)

The author also put the new model into practice of ESP courses (English for Special Purposes). This is a new model with few researchers to explore.

2.2. Framework of MFE

MFE is carried out according to the theory of constructivism theory in learning English. The following graph shows the main framework, it includes in-class, outside, cooperation and materials. MFE exchanges the roles of students and lecturer, students play the main role while lecturers play the supporting role. Below is the framework of MFE.

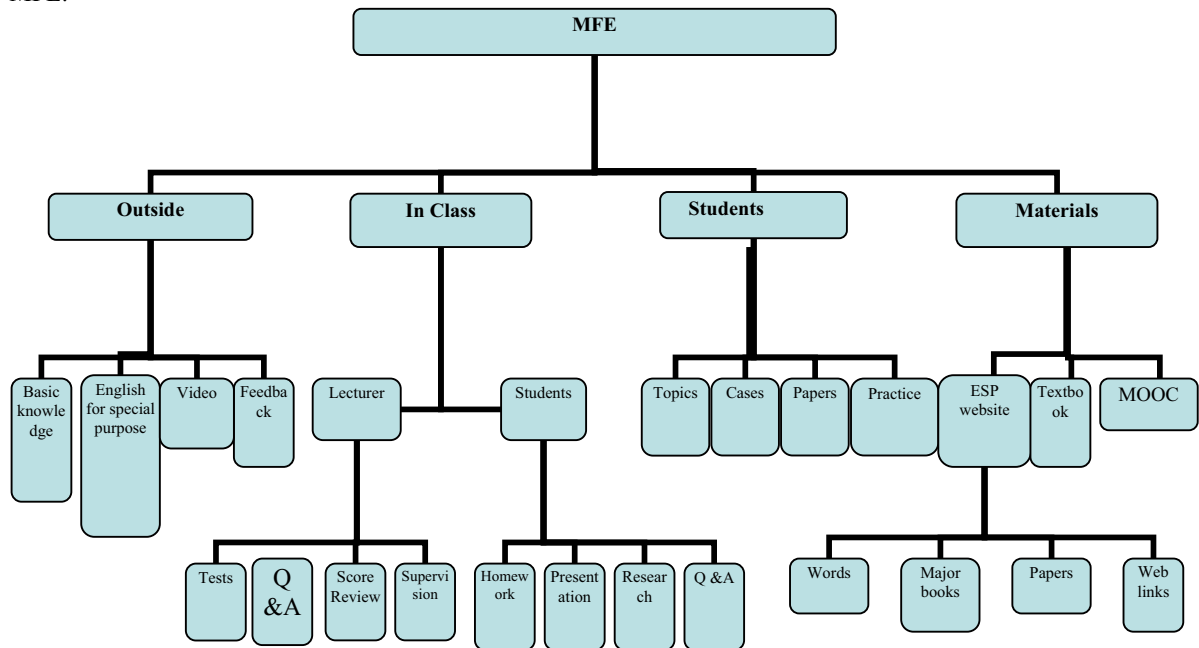


Fig. 1. The framework of MFE

2.3. Implementation of MFE

According to Tyler (Tyler, 1949), the father of the curriculum theory, the framework of one course contains four factors: Purpose, content, teaching organization and teaching evaluation. The paper shows the new model MFE in these 4 parts accordingly.

2.3.1 Purpose and content

MFE is not only for English learning, it mainly develops students' ability in language, major knowledge, learning skills, communication and so on, MFE intends to cultivate the "Excellent adaptable international talents", considering the high speed of word development.

MFE contains the content both in-class and outside. English plays a supporting role in the class, it mainly focuses on the major and research, which will boost students' interests and motivation (Bruner, 1966). English, with the most advanced modern knowledge in metallurgical area, will stimulate student's learning desire. The content contains four aspects: online platform, textbook, MOOC and self-supporting materials, showed as follows.

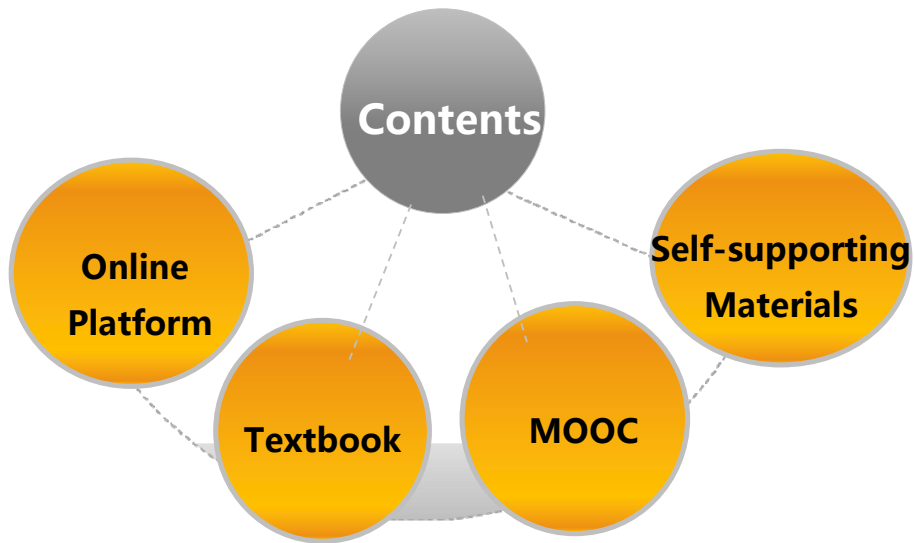


Fig. 2 The content of MFE

2.3.2 Teaching organization and evaluation

The evaluation and scoring is not only depended on lecturers, it is the combination of evaluation of students, lecturers and online. Below is the practice of MFE.

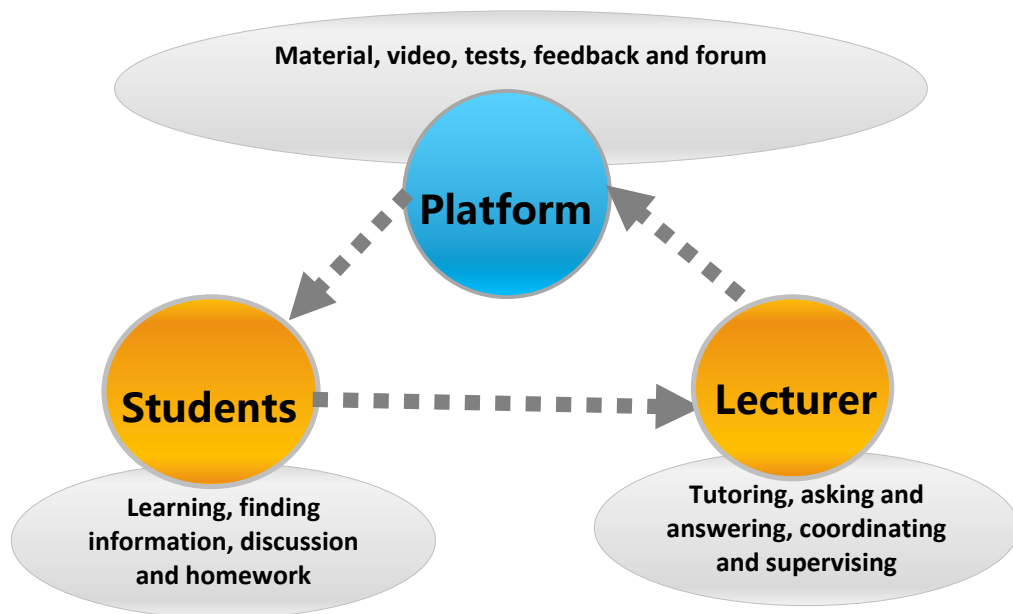


Fig.3 The practice of MFE

For the organization of MFE, it contains three parts: self-study, interactive section, evaluation and tutoring. More information can be found from the framework of MFE above. For the course, in the first phase, students will master metallurgical words and basic knowledge; In the second phase, students mainly focus on learning MOOC video and metallurgical advanced knowledge; in the third phase, students do research of the area.

2.4 Analysis of MFE

The paper does the data analysis of students scores, surveys of evaluation in the quantitative and qualitative way. The effects of MFE is evaluated in three parts: the improvement of the score, the evaluation of the learning strategies and feedback. The author uses SPSS 22.0 software to make the statistical analysis as follows.

2.4.1 The improvement of students in score

The paper compares the scores of the experimental class of 35 students before and after MFE, and also makes the comparison of the scores between the experimental class and the control class. The author makes the independent sample T test and pair-sample T test, the data analysis shows below:

Table 1. The comparison of English test results

Test	Experimental group		Control group		Comparison	
	Mean	SD	Mean	SD	t	P
1	70.914	12.193	61.380	16.132	2.629	0.075
2	76.600	8.286	69.820	10.730	2.682	0.01
	Experimental group before and after comparison		Control group before and after comparison			
t	-0.614		-6.106			
P	0.000		0.000			
Correlation	0.921		0.941			

T=2.682, P=0.01, it shows the apparent difference with statistical meaning, the experimental group is improved more than the control group. The mean of the experimental group before and after MFE is 70.914 versus 76.600, P=0.000, it means the great improvement of itself with statistical meaning. So MFE helps students in tests.

2.4.2 The evaluation of students in learning strategy

Learning strategies can also be improved by MFE, according to Sill's learning strategy survey by Oxford, it contains 5 rates, higher rate means higher evaluation(Oxford, 1990), the author makes the multivariate statistical analysis, the learning strategy is analyzed in 7 dimensions, which shows as follows:

Table 2. The comparison of English test results

	Mean of the experimental group (N=35)	Mean of the control group (N=26)	Z	P
Memory strategy	3.49	2.50	-3.760	0.000
Cognitive strategy	3.26	2.81	-3.025	0.002
Compensatory strategy	3.31	2.58	-3.360	0.001
Metacognitive strategy	3.69	2.81	-3.035	0.002
Affective strategy	3.29	2.65	-2.453	0.014
Social strategy	3.51	2.77	-2.805	0.005
Overall	3.63	2.92	-2.650	0.008

Two groups are compared with each other in the 7 dimensions, the value of P is small, which means the contrast is apparent. Moreover, the experimental group's scores of strategy is higher than that of the control group, so the contrast is true with statistical meaning. In this way, MFE plays an significant role in improving students' strategy.

2.4.3 The feedback of MFE

Considering the fourth generation of international education evaluation theory that it proposes the evaluation in the perspectives of multiple, diverse and full involvement of factors. The analysis of the effect of MFE is not only with the objective evaluation, it also contains the subjective evaluation. The survey is mainly about 4 parts: Online platform, In class, outside and evaluation. The paper shows the feedback of MFE, and makes the reliability analysis.

Table 3. The comparison of English test results

Items		Very satisfied	Satisfied	General	Unsatisfied	Very unsatisfied	Score	Total
Online platform	Design	8	19	5	3	0	32	105
	Application	7	16	9	3	0	27	
	Function	9	13	12	1	0	30	
	Communication	3	15	13	3	1	16	
	Video	20	11	4	0	0	51	
In class	Materials	18	12	3	2	0	46	175
	Homework feedback	7	19	8	1	0	32	
	Teaching	15	17	2	1	0	46	
Outside	Interactivity	11	17	5	2	0	37	156
	Cooperation	14	16	4	1	0	43	
	Exercise	12	15	6	2	0	37	
	Tutoring	12	17	4	2	0	39	
Strategy	×							
Evaluation		10	18	5	2	0	36	36
Total		15	16	3	1	0	45	45

Table 4. The comparison of English test results

Items	Cronbach's Alpha	Total subitems
Online platform	0.739	4
In class	0.703	4
Outside	0.576	4
Total	0.893	14

The author finds that the Cronbach's alpha is high, which means the survey is reasonable. Except the In-class reliability is lower, other dimensions are high with the reliability of more than 0.07. The satisfaction contains 13 dimensions with the score of more than 21 except the communication. The percentage of satisfaction is above 80% except function. In this way, the data shows the positive effect of MFE.

3. Conclusion

The analysis above shows the positive effects of MFE, it improves students' score, and learning strategy with certain satisfactory degree, the paper makes conclusion and further suggestions in this area. MFE has three advantages:

- Practical, MFE learning is not only limited to textbook and readings, it encourages students to learn by themselves, do research by themselves, and the study is mainly about practical learning instead of theoretical learning.
- Professional, English course was mainly about the common information, MFE is focused on the professional content in English, it both improves English ability and professional skills.
- Advanced, nowadays, there were few courses combined MOOC. "Flipped Classroom" and ESP, MFE explores the new area in English education and shows the practical way.

But MFE also has its own shortcomings, it needs further improvement in the area of evaluation system, interactive communication, teaching design and self-study cultivation.

Just like the ancient Xunzi said, Tell me and I will forget, show me and I will remember, involve me and I will understand. The most important way of learning English is to make students involve in the English environment. This is definitely the tendency of the education in the future. MFE makes the involvement possible. The paper also suggests universities should improve the evaluation system based on the new technology, and the lecturers transfer its role from the leading role to the supporting role but with more advanced abilities, such like mastering new technology, informative source application, interactive communicating ability and comprehensive knowledge network. Moreover, the new model of education is not only about the transformation of students, lecturers, learning materials and online resource, it also needs the involvement of university, enterprises and the public resources. The course like MFE will make the connection with the resources outside school and keep in line with the social development. This kind of education is suggested to develop on the road to the general positive circulation of the whole society.

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